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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/505,775	02/17/2000	Kenji Oi	1076.1053/JDH	6984

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EXAMINER

LEE, TIMOTHY L

ART UNIT PAPER NUMBER

2662

DATE MAILED: 06/18/2004

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/505,775

Applicant(s)

OI ET AL.

Examiner

Timothy Lee

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 March 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 5,9 and 18-22 is/are allowed.
- 6) ☒ Claim(s) 1-4,6-8,10-17 and 23-26 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 2, 4, 7, 10, 23, and 24 are rejected under 35 U.S.C. 102(b) as being anticipated by Limb (US 5,111,456).

3. Regarding claims 1 and 23, Limb discloses a communications system that has stations that are connected by lines. As shown in Fig. 1, the stations are connected by two lines 10, 11 (first node, second node, and a third node connected by a bus). See col. 5, lines 50-52. Frames are passed down the line (transferring a write packet from the first node to the second node). See col. 6, lines 19-21. Fig. 6 shows an example of a frame that is used in the system. The frame comprises two parts: a control field 20 and a data field 21. The data field receives data packets from the stations. See col. 6, lines 45-48. When a station receives a frame in which the data field is empty, it transmits a packet to that frame (storing data to be written in a data portion of a packet addressed to the third node in the data portion of the write packet at the second node). See also col. 6, lines 26-28. The frame is then passed along the line with its busy bit set to indicate that its data field now contains data (transferring the write packet from the second node to the third node). Also, the present invention may be used in an arrangement in which data packets are passed only in one direction (by a bus but not connected in a ring form). See col. 5, lines 12-14.

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4. Regarding claims 2 and 24, as mentioned previously, Limb discloses that the station loads a data into the frame when the data field of the frame is empty (wherein the write packet comprises a blank data portion for storing the data). See col. 6, lines 26-28.

5. Regarding claim 4, as mentioned previously, the frame contains a control field and a data field. If the busy bit in the control field is set, then this indicates whether or not the data field is empty or not.

6. Regarding claim 7, Limb discloses where the frames are sent with each writing cycle (predetermined time periods). See col. 6, lines 60-63.

7. Regarding claim 10, it is inherent in Limb that there is an identifying circuit which recognizes that the busy bit is set to indicate that the data field is empty or not.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Limb in view of Perlman (US 5,398,242) and in light of the rejection to claim 1.

10. Regarding claim 3, Limb does not expressly disclose where the plurality of second nodes substantially send packets to a plurality of third nodes. Perlman discloses broadcasting an explorer packet, which transmit simultaneously from a plurality of second stations to a plurality of third stations. See at least col. 6, lines 24-62 and Fig. 10C; see also col. 22, lines 11-61. It would have been obvious to a person of ordinary skill in the art at the time of the invention to

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modify Limb in order to send many write packets simultaneously like the broadcast packets in Perlman. One would have been motivated to do this because it would have been more efficient to transfer write packets simultaneously if all of the write packets were to carry similar information as similar speeds.

11. Claims 6, 12, 13, 14, 16, 17, 25, and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Limb and in light of the rejection to claim 1.

12. Regarding claims 6, 13, and 16, Limb does not expressly disclose transferring the data packet including the processed data to the third node, wherein the write packet transferring is performed after the data packet transferring. However, the stations will process the data once it has received data to process. It would have been obvious to time the processing such that the write packet is sent after the data packet is transferred. One would have been motivated to do this because to ensure that the flow of packets remains steady and does not congest.

13. Regarding claims 14 and 17, as mentioned previously, the frame contains a control field and a data field. If the busy bit in the control field is set, then this indicates whether or not the data field is empty or not.

14. Regarding claim 12, Limb does not expressly disclose retaining data that is address for the third node if it already exists in the packet. However, it would have been obvious to retain the data as opposed to deleting it when the packet traveled from the second node to the first node. One would have been motivated to do this because rewriting over the data addressed to the third node would cause the sending to node to have to send the data again. Resending data is a waste of bandwidth, so it is more efficient not to write over the data.

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15. Regarding claims 25 and 26, Limb does not expressly disclose where the data is image data. However, it would have been obvious that the data is image data. One would have been motivated to send image data because if that was the type of data that needed to be transferred, then it would be efficient to transfer it using the method taught in Limb.

16. Claims 8 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Limb in view of Ching et al. (US 4,665,514) and in light of the rejection to claim 1. Limb does not expressly disclose padding the packets until they are to a fixed size. Ching et al. discloses padding to build a packet to 64 bits of data to make the data packet fixed size. It would have been obvious to a person of ordinary skill in the art at the time of the invention to pad the packets until they were filled to capacity in Limb using the teachings from Ching et al.. One of ordinary skill in the art would have been motivated to do this because sending packets of a fixed length reduces the complexity of having to determine when a variable length packet ends.

Response to Arguments

17. Applicant's arguments with respect to claims 1-24 have been considered but are moot in view of the new ground(s) of rejection.

Allowable Subject Matter

18. Claims 5, 9, 15, and 18-22 allowed.

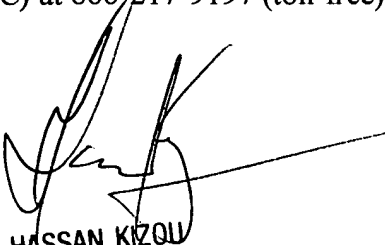
Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Timothy Lee whose telephone number is (703)305-7349. The examiner can normally be reached on M-F, 9-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hassan Kizou can be reached on (703)305-4744. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

TLL
Timothy Lee
June 9, 2004


HASSAN KIZOU
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